

In the Claims:

Please amend the claims as follows:

16. (Amended) A method for generating a lexical knowledge base in a memory of a machine, said generating comprising the steps:

(a) parsing a segment of text to obtain a logical form corresponding thereto using a natural language parser associated with said machine;

(b) using said machine to extract from the logical form [a] at least one complex semantic relation structure, the complex semantic relation structure including at least a headword, a semantic relation, and a value; the value of said complex semantic relation structure including a primary value term, a lower level relation, and a lower level value term;

(c) storing in the lexical knowledge base in said machine memory the complex semantic relation structure in association with the headword; and

(d) augmenting the lexical knowledge base by:

(1) inverting the semantic relation structure; and

(2) storing in said memory, in association with the primary value term, the inverted complex semantic relation structure, said stored inverted complex semantic relation structure including the lower level relation and the lower level value term.

18. (Amended) The method of claim 16 [which includes:

(a) providing a natural language corpus;

and] in which the parsing [step includes] and extracting steps include:

(a) providing a natural language corpus:

- (b) analyzing the corpus by machine to identify a set of text segments therein;
- (c) automatically discerning from the text segments a first collection of complex semantic relation structures; and
- (d) storing data from the first collection of complex semantic relation structures as part of the lexical knowledge base;
and in which the augmenting step includes:
 - (e) inverting the first collection of semantic relation structures to yield a second collection of corresponding, inverted semantic relation structures; and
 - (f) storing data from the second collection of corresponding, inverted semantic relation structures in said memory.

20. (Amended) A method for generating a lexical knowledge base in a machine, **said generating** comprising the steps:

- (a) using a natural language parser associated with said machine to parse a segment of text to obtain a logical form;
- (b) using said machine to extract from the logical form a semantic relation structure, the semantic relation structure including at least a headword, a semantic relation, and a value;
- (c) storing in a memory associated with said machine the semantic relation structure in association with the headword in the lexical knowledge base; and
- (d) augmenting the lexical knowledge base by:
 - (1) inverting the semantic relation structure; and

(2) storing, in association with the value, the inverted semantic relation structure.

21. (Amended) The method of claim 20 in which the semantic relation structure includes [one or more elements] at least one element in addition to a headword, a semantic relation, and a value.

30. (Amended) A machine-implemented method for generating a lexical knowledge base comprising the steps:

(A) using a computer to automatically process a text and identify at least a first semantic relation structure therein, said first semantic relation structure including [more than three] at least four elements;

(B) using the computer to invert the first semantic relation structure to yield a second corresponding, inverted semantic relation structure; and

(C) storing data from the second semantic relation structure as part of a lexical knowledge base.

33. (Amended) The method of claim 30 in which the identifying step includes automatically parsing the text with a natural language parser, the parsing including:

applying a first set of rules to the text to yield a syntactic structure corresponding thereto;

applying a second set of rules to the syntactic structure to produce a corresponding logical form; and

extracting from the logical form [a] said first semantic relation structure, said first semantic relation structure including at least a headword, a semantic relation, and a value[, said extracted semantic relation structure being said identified semantic relation structure].

36. (Amended) The method of claim 30 [which includes] in which:

step (A) includes:

(a) providing a natural language corpus;

[and in which the identifying step includes:]

(b) analyzing the corpus by machine to identify a set of text segments therein;

(c) automatically discerning from the text segments a first collection of semantic relation structures; and

(d) storing data from the first collection of semantic relation structures as part of the lexical knowledge base;

[and in which the inverting step] step (B) includes:

(e) inverting the first collection of semantic relation structures to yield a second collection of corresponding, inverted semantic relation structures; and

[and in which the storing step] step (C) includes:

(f) augmenting the lexical knowledge base by storing data from the second collection of corresponding, inverted semantic relation structures.